We claim:

1. A method of producing, from a first device-dependent image data set, a second image data set matched to a real process, which comprises, by using inverse gamut mapping, transforming color values from the first image data set into color values of a device-independent color space and, by using gamut mapping, transforming these device-independent color values into the second image data set of an output device.

2. The method according to claim 1, wherein the device-dependent image data sets are CMYB image data sets.

3. The method according to claim 2, which includes using a build-up of black in the first image data set for producing the second image data set.

4. The method according to claim 3, which includes analyzing the build-up of black in the first image data set, and using it in identical form for the production of the second image data set, if the first and the second devices are based upon identical processes.

5. The method according to claim 3, which includes analyzing the build-up of black in the first image data set and, for the output in accordance with the boundary conditions of the second device, setting the black build-up to the limits of the

second device, if a direct transfer is not possible because of the process.

6. The method according to claim 1, wherein the device-dependent image data sets are RGB image data sets.

7. The method according to claim 1, wherein the device-independent image data sets are Lab image data sets.

8. A color management method for a printing process, which includes producing, from a device-independent image data set obtained from an original image, a first CMYB image data set for a standard printing process, by using a first transformation, and then producing a second CMYB image data set matched to a real printing process, by using a second transformation, which is determined by printing a test image, which comprises comparing the printed result with a predefinition, and optimizing the second transformation in order to minimize deviations between the printed result and the predefinition, the predefinition for the comparison being the device-independent image data set of the test image.

9. The color management method according to claim 8, which includes selecting the device-independent data set from the group consisting of an Lab and an RGB data set, respectively.

10. The color management method according to claim 8, which includes producing a device-independent image data set from the printed result, and performing the comparison by using the device-independent data sets from the test image and the printed result.